Fusion3

F200 3D Printer

OPERATION:
AI PRINT MONITORING

Revision 7/17/2025

AI PRINT MONITORING

How to use and configure F200's built-in AI print monitoring

!! IMPORTANT !!

NO SOFTWARE IS FOOLPROOF! FUSION3 RECOMMENDS YOU ALWAYS MONITOR YOUR PRINTS WITH A HUMAN IN ORDER TO AVOID DAMAGE TO YOUR PRINTER OR UNSAFE CONDITIONS. DAMAGE CAUSED BY UNATTENDED OPERATION MAY NOT BE COVERED UNDER YOUR WARRANTY.

INTRODUCTION

Your F200 comes with AI print monitoring built in from the factory:

- Provided in partnership with printpal.io - called PrintWatch
- Enabled by default & runs automatically when you start a print.
- Runs on-device without the need for an internet connection to do the image processing.
- Will pause the print for you if it detects an error that makes it think your print has failed.

If you choose to give your F200 access to the internet, PrintWatch can also do the following:

- Send you an email if it detects an issue with your print (at a lower threshold than pausing the print).
- Send you an email if another type of error occurs (feed error, heater fault, etc).
- Even with internet access, all image processing is done on-device.

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YOUR 3D PRINTER NEEDS YOUR ATTENTION!

Looks like you may have a fault or other condition that needs your assistance:
M4001 - Heater Fault

Printer Name: WGUSV-3V8LU-F65J0-409NW-MA03Z-ZK4UY
Date & Time: 2025-04-26 10:49:53

HOW IT WORKS

- PrintWatch grabs a frame from the camera every 3-5 seconds. It evaluates that frame for signs of spaghetti, curling, layer shifting, and other print defects using a machine learning algorithm.
- It generates a score (0-100) depending on the size of the issue, and how confident it is that there's actually a problem.
- The more frames the same problem persists for, the overall probability score increments higher.
- Once the score crosses the notification or action thresholds, the software takes the action it's configured for.

LIMITATIONS

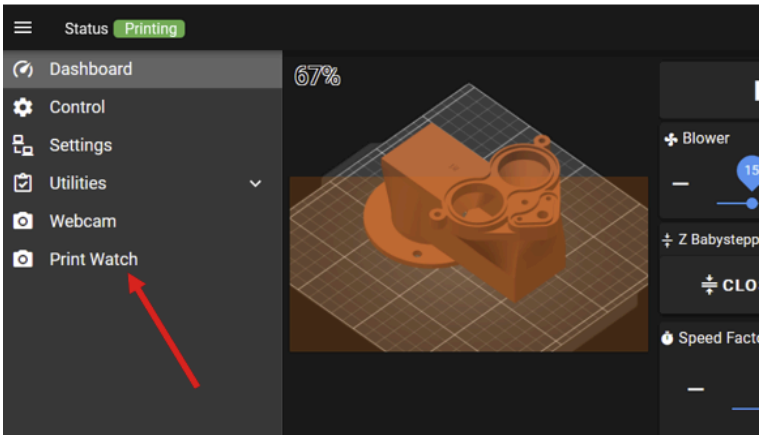
It's important to remember **PrintWatch is not foolproof and will not catch every error every time**:

- Probability-based system, not yes/no
- The full print volume is not in view of the camera at the same time. If a problem occurs out of frame, PrintWatch can't catch it
- If a problem occurs occluded by another part of your print, PrintWatch can't catch it
- Certain filaments and colors are harder for it to evaluate (clear, high gloss darks)
- Certain lighting conditions are harder for it to evaluate.

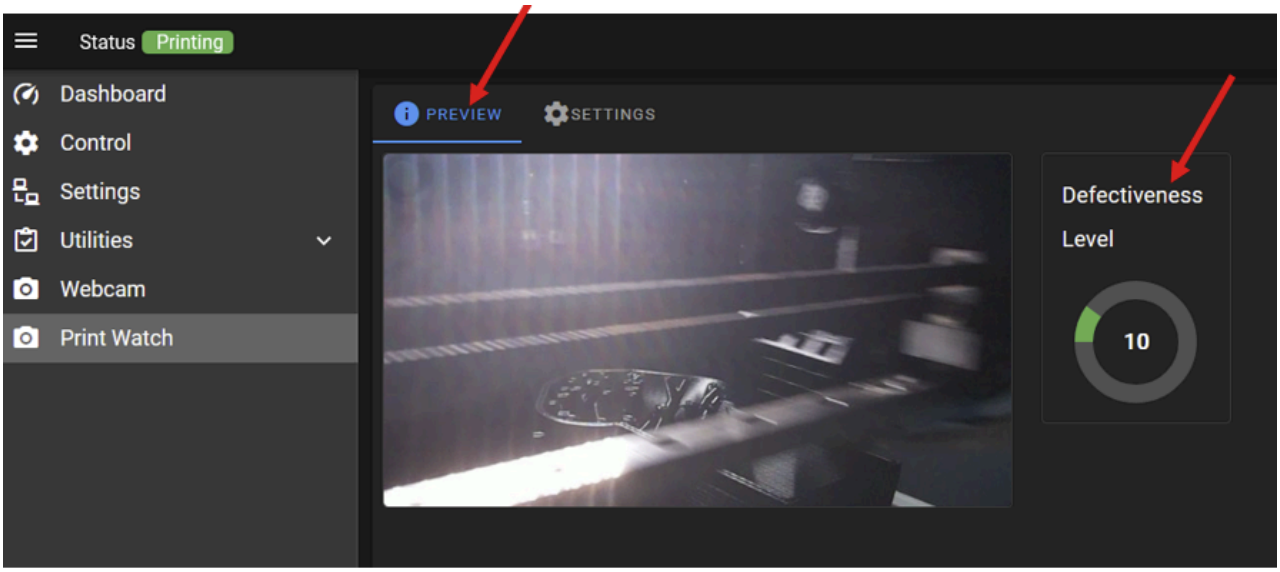
HOW TO USE PRINTWATCH

The AI monitoring runs automatically any time a print is running. You do not have to start it manually. To view PrintWatch's current print assessment and access settings:

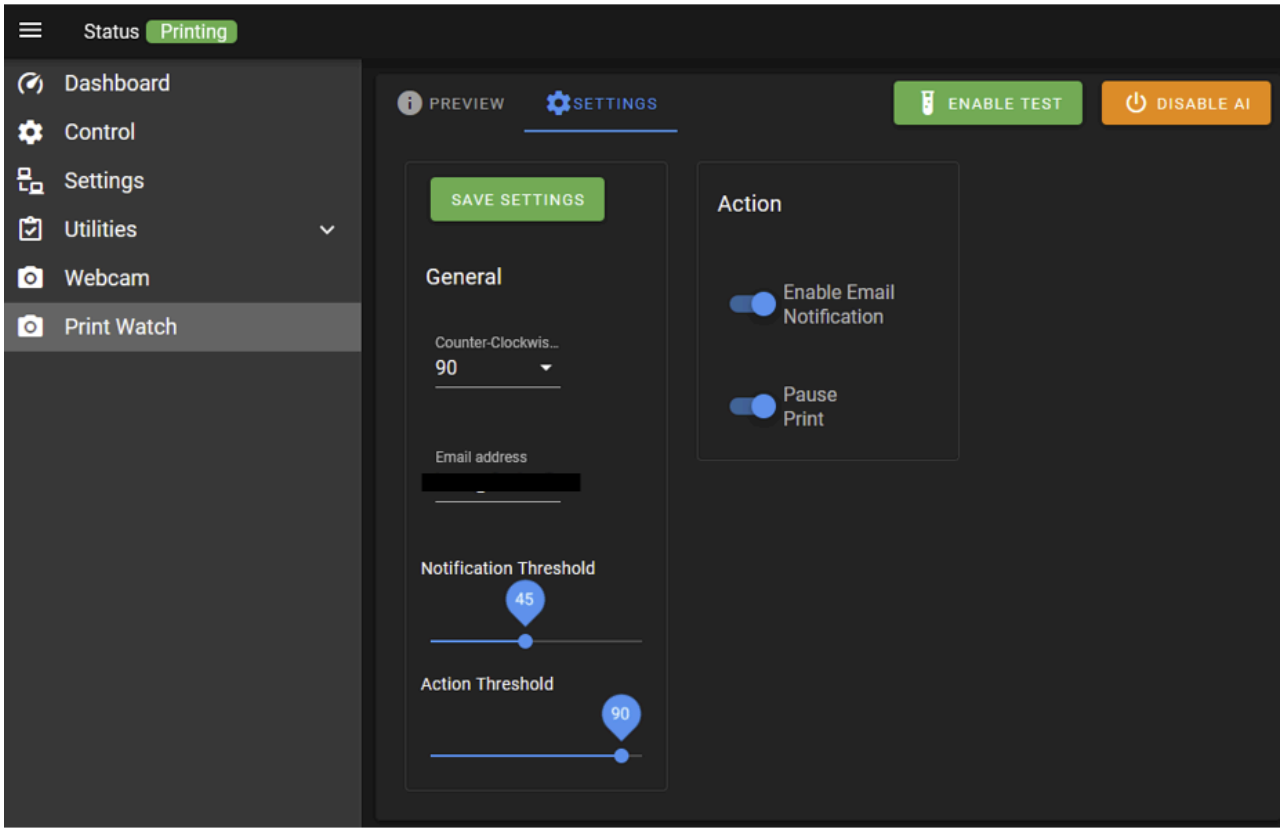
1. Click on the *PrintWatch* tab in the menu.



2. The first screen has printwatch's current estimate of the probability of a print fault (0-100) and it will superimpose a red square on the camera feed if there's a specific area it sees as problematic.



3. Click on the settings screen to:
    a. Adjust the action thresholds
    b. Enter your email address for notifications
    c. Change whether you receive emails and whether PrintWatch is allowed to pause prints on its own
    d. Disable/Enable the whole plugin


Status
Printing
Dashboard
Control
Settings
Utilities
Webcam
Print Watch
PREVIEW
SETTINGS
ENABLE TEST
DISABLE AI
SAVE SETTINGS
General
Counter-Clockwis...
90
Email address
Notification Threshold
45
Action Threshold
90
Action
Enable Email Notification
Pause Print